



**UNITED STATES DEPARTMENT OF COMMERCE**  
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/941,132	09/30/97	TANAKA	0649-SP0619P

IM11/0316  
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EXAMINER  
ZITOMER, F

ART UNIT	PAPER NUMBER
1713	

DATE MAILED: 03/16/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

<b>Office Action Summary</b>	Application No. <b>08/941,132</b>	Applicant(s) <b>Tanaka et al.</b>	
	Examiner <b>Fred Zitomer</b>	Group Art Unit <b>1713</b>	

☒ Responsive to communication(s) filed on Mar 12, 1999

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

#### Disposition of Claims

☒ Claim(s) 1-3 and 7-19 is/are pending in the application.

Of the above, claim(s) 1-3, 7, and 8 is/are withdrawn from consideration.

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 9-19 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

#### Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been  
☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

#### Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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1.

The request filed on February 11, 1999 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 08/941,132 is acceptable and a CPA has been established. An action on the CPA follows.

2.

Applicant's amendments and remarks of March 12, 1999 are acknowledged. The rejections of claims 1-3 and 7-10 under 35 USC 112, first and second paragraphs, both of record are withdrawn in view of applicant's amendments. The rejection of record of claims 1-3 and 7-10 under 35 USC 103 is replaced with a similar rejection of claims 9-19 in view of applicant's election of process claims and submission of new claims as stated below. No claim is allowed.

3.

As noted by applicant in Paper No. 22 the restriction requirement given in Paper No. 2 was reimposed and applicant's election with traverse of Group II in Paper No. 22 is acknowledged. Upon reconsideration Groups II and III, now claims 9-19, are being rejoined and examined at this time. The traversal is on the ground that the decision to reinstate the restriction requirement is disconcerting, time consuming and expensive. This is not found persuasive because the decision was made subsequent to applicant's stated intention at the interview of March 2, 1999 to actively pursue the present process claims. Prior to this time prosecution focused entirely on the product claims. Of pertinence here is recent PTO policy which gives greater consideration to allowing process and process of use claims after the corresponding

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product claims have been allowed. Accordingly, when the present process claims are allowed the product claims would still be at issue absent restriction. Maintaining the restriction requirement clearly simplifies the issues and advances prosecution.

The requirement is still deemed proper and is therefore made FINAL.

4.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5.

Claims 9-<sup>19</sup>~~18~~ are rejected under 35 U.S.C. § 103 as being unpatentable over Yasuyuki et al., EP-A- O 584 597 taken with Kondo et al., U.S. Patent 4,208,490, or Burlett et al., U.S. 5,118,546, or Hayashi et al., U.S. 4,528,340. 72

The claimed invention relates to grafting and epoxidizing natural rubber which has been deproteinized. All of the procedures are generally known and the present coupling is deemed obvious for the additive effect. More directly, Yasuyuki teaches deproteinizing natural rubber to nitrogen levels below 0.02% by weight to remove allergens and enhance physical properties [Table 1, Example 1, claim 2, page 2, line 52 - page 3, line 11]. "By almost completely eliminating non-rubber components, an advantageous material for producing rubber products which suffer from little energy loss and have excellent mechanical properties, improved crepe characteristics and improved aging resistance, can be provided." [page 3, lines 3-6]. The deproteinized rubber also possesses excellent processing and mechanical characteristics [page 24, lines 1-27]. Kondo

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teaches enhancing the physical properties and appearance of natural rubber by grafting with methylmethacrylate [column 2, line 61 - column 3, line 49; column 4, lines 24-28]. There is no limitation on the proportion of rubber to grafted monomer, however, a 3-60 % range of rubber content by weight is preferred [column 3, lines 30-34] which appears to fall within the present graft ratio range of 26.5-36.7. It is generally known in the art to epoxidize rubber to enhance properties such as hydrophilicity. Hayashi e.g. teaches epoxidizing rubber in the range of 5-60% [column 3, lines 3-25] while Burlett teaches epoxidizing rubber in the range of 15-85% [column 2, lines 5-17]. Kondo or Hayashi or Burlett differs from the claimed invention by not disclosing deproteinized rubber.

It would have been obvious to deproteinize rubber before grafting and/or epoxidation in the expectation of reducing allergens and enhancing the physical and mechanical properties thereof because Yasuyuki teaches that deproteinization affords reductions in allergens and enhancements in physical and mechanical properties for the same class of rubbers used by Kondo or Hayashi or Burlett.

Applicant's arguments filed March 12, 1999 have been fully considered but they are not persuasive. The essence of said arguments is that deproteinization has solved a problem associated with either grafting or epoxidizing rubber. Assuming *arguendo* that unexpected results have been obtained the argument is not compelling because obviousness does not require a showing of different motivation. In this regard it is well settled that:

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- unexpected results do not outweigh expected results. *In re Nolan*, 193 USPQ 641 (CCPA 1977).

- the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

In the present case one of ordinary skill in the art desiring to enhance the physical, mechanical and/or biological properties of natural rubber by using the deproteinization of Yasuyuki would inherently realize the present efficiencies of epoxidation and grafting when using the methods of Kondo or Hayashi or Burlett which is obvious as per *In re Nolan* or *In re Obiaya*.

5.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred Zitomer whose telephone number is (703) 308-2461. The examiner can normally be reached Monday through Friday from 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful Jeffrey T. Smith can be reached at (703) 308-4345. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3599.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-2351.



**FRED ZITOMER  
PRIMARY EXAMINER  
GROUP 1710**

Zitomer/fz  
March 15, 1999